

Roadmap IV Activities (2010/2011)				
		Update	Future Activities	
Core Issue*	Activity (* Conducted in 2010, but not included in Roadmap III)	2010	2011	Link
Economic Incentives and Disincentives (Non-ADC)	Renewables Workplan	See renewables activities under AB 118, AD Program EIR, Low Carbon Fuel Standard, California Biomass Collaborative Forum, Sustainable Biofuels Roundtable, Emerging Technologies Guidance Document, Bioenergy and Biofuels Contract, and Integration of Rotary Drum Reactor and AD Technologies for Treatment of MSW.		See links below for activities listed to left under renewables workplan activities update/future activities
	Assist California Energy Commission in Review of AB 118 Applications	Participate on Investment Plan Advisory Committee, review CEC's annual investment plan, consult with CEC on technical aspects of proposals to develop waste-derived transportation fuels, review applications, consult with ARB on related issues; in 2010, over \$30 million was awarded for biomethane production activities and about \$3 million for biodiesel production.		http://www.energy.ca.gov/2009publications/CEC-600-2009-008/CEC-600-2009-008-CMF.PDF
	CEC Bioenergy Action Plan	Review and comment on CEC's 2011 Bioenergy Action Plan	CEC's 2011 Draft Bioenergy Action Plan includes \$8 million for pre-landfill biomethane projects.	http://www.energy.ca.gov/2011publications/CEC-300-2011-001/CEC-300-2011-001-CTF.PDF
	Economic Incentives Webpage	Created economic incentives webpage; coordinated with CalRecycle's General Business Assistance effort	Update economic incentives webpage as required.	http://www.calrecycle.ca.gov/business/incentives.htm
	* RMDZ Loans	Funded a \$1,350,000 loan to Ortigalita Power, www.PhoenixEnergy.net, to build a biomass conversion plant in Merced County to process wood chips and other organics into electricity for sale to PG&E	Approved loan of \$1,637,500 to Environ Strategy, www.EnvironStrategy.com, to build an anaerobic digestion plant in San Bernardino County to process food waste into biomass gas and generate electricity for sale to the Inland Empire Utilities Authority, www.IEUA.org	http://www.calrecycle.ca.gov/RMDZ/ZoneAdmin/

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Economic Incentives and Disincentives (Non-ADC) (cont.)	Third Assessment of California's Compost- and Mulch-Producing Infrastructure	Published August 2010	None Planned	http://www.calrecycle.ca.gov/Publications/Organics/2010007.pdf
	Clearinghouse and Guidance Tools for Developing Regional Infrastructure Studies of Organic Processing and Organic Material Supply	See Organics Toolbox		http://www.calrecycle.ca.gov/Organics/RoadMap08/ToolBox.htm
	Baseline Infrastructure Inventory and Information Management Framework Contract	Completed initial inventory of disposal, diversion processing, and manufacturing facilities; built database and populated it with 3rd-party data	Projected to be completed by mid-2011; verify data with facilities; build model on facility capacity to 2025; identify capacity shortfalls; outreach through articles and conference presentations	http://www.calrecycle.ca.gov/Contracts/details.asp?ID=700
	* Anaerobic Digestion Scoping Plan Measure (See AD Program EIR)	See AD Program EIR	See AD Program EIR	http://www.calrecycle.ca.gov/swfacilities/Compostables/AnaerobicDig/default.htm

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Siting and Capacity Development	Low Carbon Fuel Standard Scoping Plan Measure	Assisted ARB in development of AD pathway; working with CRRC, industry, and academia to gather processing data.	AD pathway projected to be completed late-2011	http://www.arb.ca.gov/fuels/lcfs/lcfs.htm
	CDFA Issue: Safe Management of Waste Meat, Poultry, and Fish Waste	CDFA and CalRecycle developed a FAQ document on safe management of waste meat, poultry, and fish waste. This FAQ targets generators, haulers, and solid waste facilities.	Review, revise, and finalize FAQs to align with new CDFA rendering rules (rulemaking filing scheduled for Fall 2011). Participate with CDFA in development of rendering rules.	http://www.calrecycle.ca.gov/swfacilities/compostables/wastemeat.pdf
	*Bifenthrin in Compost	Stakeholder meeting held in Monterey in January 2010. Bifenthrin was ruled by National Organics Program to be permissible in compost used for organic production if the concentration value was below the unavoidable residual environmental contamination (UREC) level defined as the lowest USEPA tolerance level and did not contaminate crops, soil, or water.	DPR will continue its reevaluation of all pyrethroids, including bifenthrin.	http://www.calrecycle.ca.gov/organics/threats/clopyralid/
	California Statewide Waste Characterization Study	Published 2008 Study in August 2009	Next study planned for 2014. In mean-time, existing waste characterization data will be used to support commercial recycling regulation development, jurisdiction program implementation.	http://www.calrecycle.ca.gov/Publications/General/2009023.pdf

	Update Organics Toolbox	Staff collected and updated information from local jurisdictions implementation policies related to compost and mulch use.	Staff will continue to update toolbox with local jurisdiction implementation policies related to compost and mulch use.	http://www.calrecycle.ca.gov/Organics/RoadMap08/ToolBox.htm
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Regulatory & Permitting Constraints	Air Districts Composting Rules	Collaborate with San Joaquin Valley Unified Air Pollution Control District Rule 4566 and South Coast Air Quality Management District on revised Rule 1133.1 and 1133.3.		http://www.calrecycle.ca.gov/Organics/Air/default.htm#Rules
	* Collaborate with Air Districts and USEPA on Federal New Source Review application to composting	San Joaquin Air District is applying Title I Clean Air Act rules (New Source Review) to new and expanded composting facilities. This may preclude development of new facilities within the district by making new or expanded facilities economically infeasible.	Collaborate with districts, with USEPA, and potentially with legislators to look for solutions.	http://www.epa.gov/nsr/actions.html
	Coordinate with SWRCB staff on Conditional Waiver of Title 27 Waste Discharge Requirements for Composting Facilities	Submitted comments on Draft (Internal Working Document) "Current Concepts for the Conditional Waiver of Title 27 Waste Discharge Requirements for Composting Facilities (May 2010).	Conditional Waiver to be considered for approval at SWRCB November 2011 Board meeting.	http://www.calrecycle.ca.gov/Organics/Water/default.htm

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	Food and Green Waste Anaerobic Digestion (AD) Program EIR	Contractor developed AD draft Program EIR in November 2010.	Draft Program EIR released for public comment in February 2011. Final Program EIR scheduled for completion by summer 2011.	http://www.calrecycle.ca.gov/swfacilities/Compostables/AnaerobicDig/default.htm
Regulatory & Permitting Constraints (cont.)	Provide input to Central Valley Regional Water Quality Control Board on Dairy Co-Digestion AD EIR	CalRecycle staff participated in Technical Advisory Group meetings & provided comments on Notice of Preparation and draft Program EIR. Dairy Co-Digestion AD Program EIR was approved by CVRWQCB in November 2010.	Completed	http://www.waterboards.ca.gov/centralvalley/board_decisions/tentative_orders/1012/dairy_digester_eir/dairy_digstr_fpeir.pdf
	* SCAQMD Rule 1110.2 Technical Review Group	Rule concerns NOX control for internal combustion engines burning LFG. Provided comments on rulemaking during August 2010.	Monitor and comment on revised draft rule.	http://www.aqmd.gov/rules/support.html#Rule 1110.2
	CalRecycle SD 8.3 Regulations Reviews: ADC	CalRecycle, in consultation with LEA's and other stakeholders, developed a draft ADC demonstration guidance document. This document will assist landfill operators in developing, implementing, and documenting ADC demonstration projects.	Completion delayed due to resource constraints	http://www.calrecycle.ca.gov/LEA/regs/review/default.htm

Regulatory & Permitting Constraints (cont.)	Core Issue*	Activity (* Conducted in 2010, but not included in Roadmap III)	2010	2011
	S.D. 8.3 Regulations Review: Food Waste Composting	Staff visited several compost facilities to observe & document food waste composting best management practices.	CalRecycle may revise composting regulations to change the definition of food waste and allow food waste composting in EA Notification tier if certain best management practices are implemented by operators.	http://www.calrecycle.ca.gov/LEA/regs/review/default.htm
	S.D. 8.3 Regulations Review: Study on Other States' Regulatory Oversight	S.D. 8.3: Study on Other States' Regulatory Oversight of Waste and Material Handling Activities Relative to Recycling Centers, Transfer Stations, and Green Material Contamination published February 2010	Completed	http://www.calrecycle.ca.gov/Publications/Facilities/2010003.pdf
	S.D. 8.3 Regulations Review: Beneficial Reuse -Landspreading	Staff completed draft white paper in 2010.	CalRecycle may address issues if composting regulations are revised.	http://www.calrecycle.ca.gov/LEA/regs/review/default.htm
	S.D. 8.3 Regulations Review: Farm & Ranch Organic Diversion (storage of green-derived processed material)	Staff completed draft white paper in 2010.	CalRecycle may address issues if composting regulations are revised.	http://www.calrecycle.ca.gov/LEA/regs/review/default.htm
	CA Biomass Collaborative Forum	Forum Held May 10-11, 2010	Forum to be held April 5-6, 2011; participate in agenda development	http://biomass.ucdavis.edu/f2010.html
	* Sustainable Biofuels Roundtable	Not Active	Participate in Sustainable Biofuels Roundtable; work with California Biomass Collaborative on multi-agency conversion technology facility tour	http://biomass.ucdavis.edu/

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Regulatory & Permitting Constraints (cont.)	Outreach on Department of Water Resources (DWR) Model Water Efficient Landscape Ordinance (effective September 10, 2009)	Provided DWR with flyer templates for its workshops, updated CalRecycle web page to promote the ordinance.	Completed	http://www.water.ca.gov/wateruse/efficiency/landscapeordinance/
	Emerging Technologies Guidance Document	Completed first draft	Completion delayed due to resource constraints	N.A.
	Mandatory Commercial Recycling Rulemaking	Workshops held June 16 and September 21, 2010.	Workshop held January 19, 2011. Formal rulemaking anticipated to start late spring 2011.	https://share.epanet.ca.gov/Waste/MCR/default.aspx
	SWRCB Workgroup for Compost Use on Food Crops	Participated in Workgroup; Attended Meetings	No further meetings scheduled	N.A.
	* CDFA Issue: AB 856 - Organic Fertilizer	CalRecycle was represented on CDFA's AB 856 Implementation Committee, which met a half dozen times and includes members from all major stakeholder groups associated with organic production.	Workshops for composters held in February in Modesto and in April in San Diego at BioCycle. CDFA submitted regulations to OAL in February. Composters should begin to license their facilities and register their organic inputs. AB 856 Committee "on call" for 2011 if needed.	http://www.leginfo.ca.gov/pub/09-10/bill/asm/ab_0851-0900/ab_856_bill_20091011_chaptered.pdf

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Research, Product Standards, and Technology Evaluation	Compost BMPs and Benefits Contract (IWM-07052)	A workshop was held in March 2010 to present research results from two compost demonstration projects conducted at UC Riverside's agricultural field station. The workshop consisted of a tour of the research plots and a presentation on data collected on the constituents in plot runoff. Workshop attendees included local and state water agencies, local jurisdictions, compost professionals and other interested parties.	The Compost BMP Final Report is in the final stages of review.	Anticipated to be published May 2011.
	Bioenergy and Biofuels Contract	5-TPD Biomass-to-Power and Mixed Alcohol Facility Operational 1st Quarter 2010. Overall project funded primarily by UC Discovery Grant and CEC.	CalRecycle project funding reverted; staff continues to monitor project and seek testing of post-MRF residual.	http://www.calrecycle.ca.gov/Archive/IWMBMtgsDocs/Agenda.asp?RecID=1434&Year=2008&Comm=BRD&Month=1
	Final Report on Landfill-Based Anaerobic Digestion Pilot Project	Contractor's report published April 2010; proved feasibility of concept	Completed	http://www.calrecycle.ca.gov/Publications/Organics/2010002.pdf
	Compost Pathogen Testing Analysis	Coordinated with LEAs to obtain lab analysis reports on salmonella, E coli	Reviewed lab reports to determine number of compost samples that exceeded regulatory requirement	N.A.

Research, Product Standards, and Technology Evaluation (cont.)	Core Issue*	Activity (* Conducted in 2010, but not included in Roadmap III)	2010	2011
	Final Report on Compost Cover at Landfills Methane Reduction	Received Contractor's draft report mid-2010	Final report posted February 2011. Project verifies positive benefits of methane oxidation from biocover.	http://www.calrecycle.ca.gov/Publications/Organics/2011004.pdf
	CalRecycle-Funded Compost Production N ₂ O Emissions Research	This CalRecycle contract funds research on whether compost piles emit GHG and whether application of finished compost on agricultural land can reduce N ₂ O emissions from soil. The contract with UC Davis/Prof. William Horwath signed in July. Draft study plan approved in November.	Field work has begun and will continue through 2011. Plots at Russell Ranch Farm Research Center at UCD set up. Sampling at Northern Recycling compost site in Zamora will occur throughout year.	http://www.calrecycle.ca.gov/Archive/IWMBMtgDocs/Agenda.asp?RecID=1595&Year=2009&Comm=BRD&Month=12
	Organics Diversion Alternatives LCA Contract	Held workshop on GHG Tool on April 19, 2010.	Contract completed.	http://www.calrecycle.ca.gov/climate/organics/lifecycle/
	Ag Specifications Outreach Activities	Contract completed in May 2009, all deliverables received.	In process of redefining the Compost Use Index (CUI). Staff will take contractor's summary and prepare a "Final Report" for publication and distribution. Staff will promote the updated CUI via list serves, LAMD staff and the Organics Toolbox, etc.	N.A.

Research, Product Standards, and Technology Evaluation (cont.)	Core Issue*	Activity (* Conducted in 2010, but not included in Roadmap III)	2010	2011
	Mobile Ozone Chamber Assay Contract	Field studies carried out in April, May. Lab work May-July. Draft report November-December.	Report published in February, 2011. Results presented at US Composting Council and at BioCycle. Study found that emissions from composting piles of green waste consists of 70-95% low-reactivity alcohols, which are not likely to form ground-level ozone when part of a diverse atmosphere. The total composting emissions mix is roughly 1/3 as reactive as the typical mix of VOCs found in urban areas (i.e., VOCs from all sources).	http://www.calrecycle.ca.gov/Archive/IWMBMtgsDocs/Agenda.asp?RecID=1579&Year=2009&Comm=BRD&Month=8
	*Evaluate GHG Emissions Associated With Products in Support of AB 32 Scoping Plan EPR Measure	Contracts with UC Berkeley and Santa Barbara for “EPR Evaluation of GHG Emissions Associated with Products” project run through May 2012. In 2010, contractors and project team finalized a set of 20 products to run through the LCA model which they are currently developing. The products were selected by project team based on 1) a preliminary ranking of products that represent a significant volume in California's waste stream and that also demonstrated environmental, waste management, and product management impacts, and 2) certain products of legislative interest.	Major milestones for 2011 include updating the CA-specific Economic Input Analysis Life Cycle Assessment (EIA-LCA) model with end of life (EOL) data; running model for the list of 20 products; identifying life-cycle and environmental impacts and potential improvements; developing ranked list of products on which to focus product stewardship efforts; and identifying 3 products, based on ranked list and input from a public workshop to solicit input for which to develop detailed case studies.	http://www.calrecycle.ca.gov/EPR/

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Research, Product Standards, and Technology Evaluation (cont.)	* Integration of Rotary Drum Reactor and Anaerobic Digestion Technologies for Treatment of Municipal Solid Waste	Contractor's report published June 2010	Completed	http://www.calrecycle.ca.gov/Publications/Organics/2010004.pdf
	* California Landfill Methane Inventory Model (Bogner Study)	CEC-funded project to develop model to predict GHG emissions from landfills. Provided technical support to CEC.	Finalize in 2011	http://www.energy.ca.gov/2010publications/CAT-1000-2010-005/Research_Collaboration_Case_Studies/Landfill_Methane_Inventor_y_Model.pdf
	Outreach to Caltrans and Local Government on Caltrans Compost-Based BMPs	Last series of workshops held in 2009. See agricultural specifications project for follow-up activities.		http://www.calrecycle.ca.gov/organics/erosion/Workshops/2008/Default.htm

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Education & Procurement	Organics Web Enhancement Project	Completed evaluation of all Web pages related to “organics” matters. Conducted analysis and editorial/navigational updates. New Organics home page was launched in spring of 2010. High-level link to the Food Scrap Management home page was added to the CalRecycle home page. Completed Web traffic analysis to further review customer needs and discover the nature of Web traffic searches and patterns.	Analysis and editorial/navigational updates have been ongoing over the last year and continue. A new Food Scrap Management home page, updates to "related" pages and likely new pages (due to the upgrade to the home page) are gearing for launch in the first quarter of 2011.	http://www.calrecycle.ca.gov/Organics/
	Organics Research Clearinghouse	CT Module Design Completed. Information updated and used by staff to track CT projects.	Staff to maintain on ongoing basis.	http://home.calrecycle.net/MMLAD/Teams/CT/Pages/default.aspx
	K12 Curriculum Development	State Board of Education approved Education and the Environment Initiative Curriculum and outreach to twenty school districts began. By end of 2010, fifteen school districts signed on as Early Adopters and began using the curriculum in Calif. classrooms.	Recruitment of additional Early Adopter School Districts continues and implementation across the State is growing. An online professional development (PD) tool and supporting materials are being developed and PD will be provided on a very large scale if funding is available.	http://www.calrecycle.ca.gov/Education/
	Annual LEA Training and Technical Course Series (Organics Components)	No conference held in 2010	Annual LEA/CalRecycle Conference held in Monterey February 28 - March 3, 2011	http://www.cce.csus.edu/conferences/CalRecycle/lea_tts11/index.htm

